

**April 11, 2003**

RE: **AMERICAN RENOLIT 091-16512-00127**  
TO: Interested Parties / Applicant  
  
FROM: Paul Dubenetzky  
Chief, Permits Branch  
Office of Air Quality

### **Notice of Decision: Registration**

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 4-21.5-3-4 (d) this order is effective when it is served. When served by U.S. mail, the order is effective three (3) calendar days from the mailing of this notice pursuant to IC 4-21.5-3-2(e).

If you wish to challenge this decision, IC 4-21.5-3-7 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, ISTA Building, 150 W. Market Street, Suite 618, Indianapolis, IN 46204, **within (18) eighteen days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

- (1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
- (2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
- (3) the date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

- (1) the name and address of the person making the request;
- (2) the interest of the person making the request;
- (3) identification of any persons represented by the person making the request;
- (4) the reasons, with particularity, for the request;
- (5) the issues, with particularity, proposed for consideration at any hearing; and
- (6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.



Governor

Lori F. Kaplan  
Commissioner

# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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Mr. Mike Krause  
Director of Manufacturing Operations  
American Renolit Corporation  
1207 East Lincolnway  
LaPorte, Indiana 46350

**April 11, 2003**

Re: Registered Construction and Operation Status,  
091-16512-00127

Dear Mr. Krause:

The application from American Renolit Corporation, received on November 27, 2002, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-5.5, it has been determined that the following flexible plastic film manufacturing plant located at 1207 East Lincolnway, LaPorte, Indiana 46350, are classified as registered:

- (a) Polyvinyl chloride (PVC) film manufacturing facilities consisting of the following units:
- (1) One (1) PVC plastic film calender (identified as calender 1), constructed in 1999, with a maximum throughput rate of 1,600 pounds of raw material per hour, and consisting of a PVC mix area, extruder, mill, calender, edge trimmer, and winder. Emissions from the extruder, mill, and calender are exhausted through stack CAL1-1.
  - (2) One (1) PVC plastic film calender (identified as calender 2), constructed in 2001, with a maximum throughput rate of 925 pounds of raw material per hour, and consisting of a PVC mixing area, extruder, mill, calender, edge trimmer, and winder. Emissions from the extruder, mill, and calender are exhausted through stack CAL2-1.
  - (3) One (1) PVC plastic film calender (identified as calender 3), constructed in 2003, with a maximum throughput rate of 1,800 pounds of raw material per hour, and consisting of a PVC mix area, extruder, mill, calender, edge trimmer, and winder. Emissions from the extruder, mill, and calender are exhausted through stack CAL3-1.
  - (4) Four (4) liquid scale areas (identified as W2, W3, W4, and W6).
  - (5) Two (2) weigh scale mixing areas (identified as W1 and W5) consisting of weigh scales, hand mix facilities, and two (2) 750 gallon storage tanks (identified as Tanks 91 and 92). The weigh scale areas each handle a maximum of 13,200 pounds per hour. Emissions of particulate matter are controlled using two (2) dust collectors, which exhaust at stacks PVC MIX-2 and PVC MIX-4.

- (6) PVC storage and handling systems including a pneumatic conveyance system capable of handling 13,200 pounds of PVC per hour and nine (9) storage silos (identified as Silos 1 through 9).
- (7) Sixteen (16) storage tanks, comprising:
  - (A) Ten (10) storage tanks (identified as T-31 through T-34, T-38, and T-40 through T-44), each having a maximum storage capacity of 65 gallons.
  - (B) Four (4) storage tanks (identified as T-45 through T-48), each having a maximum storage capacity of 8,086 gallons.
  - (C) Two (2) holding tanks (identified as HT-1 and HT-2), each having a maximum storage capacity of 52.8 gallons.
- (8) Four (4) cooling towers.
- (9) Two (2) oil heaters (identified as OH-1 and OH-2), each with a maximum heat input of 3.4 MMBtu per hour.
- (b) Polypropylene (PP) film manufacturing facilities consisting of the following units:
  - (1) One (1) PP plastic film manufacturing line (identified as PP Line 1), constructed in 1985, with a maximum throughput rate of 1,000 pounds of raw material per hour, and consisting of one (1) PP mixing area, two (2) dosers, two (2) extruders (identified as 1A and 1B), one (1) die, one (1) chill roll, one (1) corona treatment area, one (1) scrap recycling system (consisting of an edge trimmer, granulator, pneumatic conveyance system with two (2) cyclones, and scrap storage container), and one (1) winder. Emissions from the chill roll are exhausted through stack PP1-1. The scrap recycling system has a maximum throughput capacity of 131 pounds of PP per hour, with emissions controlled by a dust collector, which exhausts at stack PP1-2.
  - (2) One (1) PP plastic film manufacturing line (identified as PP Line 2), constructed in 1988, with a maximum throughput rate of 1,200 pounds of raw material per hour, and consisting of one (1) PP mixing area, two (2) dosers, two (2) extruders (identified as 2A and 2B), one (1) die, one (1) chill roll, one (1) corona treatment area, one (1) scrap recycling system (consisting of an edge trimmer, granulator, pneumatic conveyance system with two (2) cyclones, and scrap storage container), and one (1) winder. Emissions from the chill roll are exhausted through stacks PP2-1 and PP2-2. The scrap recycling system has a maximum throughput capacity of 171 pounds of PP per hour, with emissions controlled by a dust collector, which exhausts at stack PP2-3.
  - (3) One (1) PP plastic film manufacturing line (identified as PP Line 3), constructed in 1997, with a maximum throughput rate of 1,400 pounds of raw material per hour, and consisting of one (1) PP mixing area, two (2) dosers, two (2) extruders (identified as 3A and 3B), one (1) die, one (1) chill roll, one (1) corona treatment area, one (1) scrap recycling system (consisting of an edge trimmer, granulator, pneumatic conveyance system with two (2) cyclones, and scrap storage

container), and one (1) winder. Emissions from the chill roll are exhausted through stack PP3-1. The scrap recycling system has a maximum throughput capacity of 179 pounds of PP per hour, with emissions controlled by a dust collector, which exhausts at stack PP3-2.

- (4) Polypropylene storage and handling systems, with a maximum throughput capacity of 3,600 pounds per hour, including eight (8) silos (identified as Silos 9 through 16), storage hoppers, three (3) gravity feed weigh scales, and a mixing hopper. The storage silos are used to store polypropylene plastic resin pellets.
- (5) One (1) cooling tower.

1. Pursuant to 326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following:
  - (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
  - (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.
2. Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rates from the PVC film manufacturing facilities shall not exceed the pound per hour emission rates shown in the following table:

Process	Process Weight (lbs/hour)	Process Weight (tons/hour)	Particulate Limitation (lbs/hour)
Calender Line 1	1,600	0.8	3.5
Calender Line 2	925	0.46	2.4
Calender Line 3	1,800	0.9	3.8
Weigh Scale and Mixing Area (W1)	13,200	6.6	14.5
PVC Handling	13,200	6.6	14.5

The particulate emission limits were calculated as follows:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour; and  
P = process weight rate in tons per hour

In order to comply with these limits, the dust collectors used to control emissions from these facilities shall be in operation at all times the associated facilities are in operation.

3. Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rates from the PP film manufacturing facilities shall not exceed the pound per hour emission rates shown in the following table:

Process	Process Weight (lbs/hour)	Process Weight (tons/hour)	Particulate Limitation (lbs/hour)
PP Line 1	1,000	0.50	2.6
PP Line 1 Scrap Grinding	131	0.066	0.27
PP Line 2	1,200	0.60	2.9
PP Line 2 Scrap Grinding	171	0.086	0.79
PP Line 3	1,400	0.70	3.2
PP Line 3 Scrap Grinding	179	0.090	0.81
PP Handling	3,600	1.8	6.1

The particulate emission limits were calculated as follows:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour; and  
P = process weight rate in tons per hour

In order to comply with these limits, the dust collectors used to control emissions from the polypropylene film manufacturing facilities shall be in operation at all times the associated facilities are in operation.

This registration is the first air approval issued to this source. The source may operate according to 326 IAC 2-5.5.

An authorized individual shall provide an annual notice to the Office of Air Quality that the source is in operation and in compliance with this registration pursuant to (326 IAC 2-5.5-4(a)(3)). The annual notice shall be submitted to:

**Compliance Data Section  
Office of Air Quality  
100 North Senate Avenue  
P.O. Box 6015  
Indianapolis, IN 46206-6015**

no later than March 1 of each year, with the annual notice being submitted in the format attached.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Pursuant to Contract No. A305-0-00-36, IDEM, OAQ has assigned the processing of this application to Eastern Research Group, Inc., (ERG). Therefore, questions should be directed to Amanda Baynham, ERG, 1600 Perimeter Park Drive, Morrisville, North Carolina 27560, or call (919) 468-7910 to speak directly to Ms. Baynham. Questions may also be directed to Duane Van Laningham at IDEM, OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call (800) 451-6027, press 0 and ask for Duane Van Laningham, or extension 3-6878, or dial (317) 233-6878.

Sincerely,  
**Original signed by**  
Paul Dubenetzky, Chief  
Permits Branch  
Office of Air Quality

ERG/AAB

cc: File - LaPorte County  
LaPorte County Health Department  
Air Compliance - Rick Massoels  
Northern Regional Office  
Permit Tracking - Sara Cloe  
Technical Support and Modeling - Michele Boner  
Compliance Data Section - Karen Nowak

<b>Registration Annual Notification</b>
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This form should be used to comply with the notification requirements under 326 IAC 2-5.5-4(a)(3).

<b>Company Name:</b>	<b>American Renolit Corporation</b>
<b>Address:</b>	<b>1207 East Lincolnway</b>
<b>City:</b>	<b>LaPorte, Indiana 46350</b>
<b>Authorized individual:</b>	<b>Mr. Mike Krause</b>
<b>Phone #:</b>	<b>(219) 324-6886</b>
<b>Registration #:</b>	<b>091-16512-00127</b>

I hereby certify that American Renolit Corporation is still in operation and is in compliance with the requirements of Registration 091-16512-00127.

<b>Name (typed):</b>
<b>Title:</b>
<b>Signature:</b>
<b>Date:</b>

**April 11, 2003**

**Indiana Department of Environmental Management  
Office of Air Quality**

**Technical Support Document (TSD) for a Registration**

**Source Background and Description**

Source Name: American Renolit Corporation  
Source Location: 1207 East Lincolnway, LaPorte, Indiana 46350  
County: LaPorte  
SIC Code: 3081  
Operation Permit No.: 091-16512-00127  
Permit Reviewer: ERG/AAB

The Office of Air Quality (OAQ) has reviewed an application from American Renolit Corporation relating to the operation of a flexible plastic film manufacturing plant.

**Permitted Emission Units and Pollution Control Equipment**

There are no permitted facilities operating at this source during this review process.

**Unpermitted Emission Units and Pollution Control Equipment**

- (a) Polyvinyl chloride (PVC) film manufacturing facilities consisting of the following units:
- (1) One (1) PVC plastic film calender (identified as calender 1), constructed in 1999, with a maximum throughput rate of 1,600 pounds of raw material per hour, and consisting of a PVC mix area, extruder, mill, calender, edge trimmer, and winder. Emissions from the extruder, mill, and calender are exhausted through stack CAL1-1.
  - (2) One (1) PVC plastic film calender (identified as calender 2), constructed in 2001, with a maximum throughput rate of 925 pounds of raw material per hour, and consisting of a PVC mixing area, extruder, mill, calender, edge trimmer, and winder. Emissions from the extruder, mill, and calender are exhausted through stack CAL2-1.
  - (3) Three (3) liquid scale areas (identified as W2, W3 and W4).
  - (4) One (1) weigh scale and mixing area (identified as W1) consisting of a weigh scale, hand mix facility, and two (2) 750 gallon storage tanks (identified as Tanks 91 and 92). The weigh scale area handles a maximum of 13,200 pounds per hour. Emissions of particulate matter are controlled using a dust collector, which exhausts at stack PVC MIX-2.



- (5) PVC storage and handling systems including a pneumatic conveyance system capable of handling 13,200 pounds of PVC per hour and six (6) storage silos (identified as Silos 1 through 6).
- (6) Sixteen (16) storage tanks, comprising:
  - (A) Ten (10) storage tanks (identified as T-31 through T-34, T-38, and T-40 through T-44), each having a maximum storage capacity of 65 gallons.
  - (B) Four (4) storage tanks (identified as T-45 through T48), each having a maximum storage capacity of 8,086 gallons.
  - (C) Two (2) holding tanks (identified as HT-1 and HT-2), each having a maximum storage capacity of 52.8 gallons.
- (7) Two (2) cooling towers.
- (8) Two (2) oil heaters (identified as OH-1 and OH-2), each with a maximum heat input of 3.4 MMBtu per hour.
- (b) Polypropylene (PP) film manufacturing facilities consisting of the following units:
  - (1) One (1) PP plastic film manufacturing line (identified as PP Line 1), constructed in 1985, with a maximum throughput rate of 1,000 pounds of raw material per hour, and consisting of one (1) PP mixing area, two (2) dosers, two (2) extruders (identified as 1A and 1B), one (1) die, one (1) chill roll, one (1) corona treatment area, one (1) scrap recycling system (consisting of an edge trimmer, granulator, pneumatic conveyance system with two (2) cyclones, and scrap storage container), and one (1) winder. Emissions from the chill roll are exhausted through stack PP1-1. The scrap recycling system has a maximum throughput capacity of 131 pounds of PP per hour, with emissions controlled by a dust collector, which exhausts at stack PP1-2.
  - (2) One (1) PP plastic film manufacturing line (identified as PP Line 2), constructed in 1988, with a maximum throughput rate of 1,200 pounds of raw material per hour, and consisting of one (1) PP mixing area, two (2) dosers, two (2) extruders (identified as 2A and 2B), one (1) die, one (1) chill roll, one (1) corona treatment area, one (1) scrap recycling system (consisting of an edge trimmer, granulator, pneumatic conveyance system with two (2) cyclones, and scrap storage container), and one (1) winder. Emissions from the chill roll are exhausted through stacks PP2-1 and PP2-2. The scrap recycling system has a maximum throughput capacity of 171 pounds of PP per hour, with emissions controlled by a dust collector, which exhausts at stack PP2-3.
  - (3) One (1) PP plastic film manufacturing line (identified as PP Line 3), constructed in 1997, with a maximum throughput rate of 1,400 pounds of raw material per hour, and consisting of one (1) PP mixing area, two (2) dosers, two (2) extruders (identified as 3A and 3B), one (1) die, one (1) chill roll, one (1) corona treatment area, one (1) scrap recycling system (consisting of an edge trimmer, granulator, pneumatic conveyance system with two (2) cyclones, and scrap storage container), and one (1) winder. Emissions from the chill roll are exhausted through stack PP3-1. The scrap recycling system has a maximum throughput capacity of 179 pounds of PP per hour, with emissions controlled by a dust collector, which exhausts at stack PP3-2.

- (4) Polypropylene storage and handling systems, with a maximum throughput capacity of 3,600 pounds per hour, including eight (8) silos (identified as Silos 9 through 16), storage hoppers, three (3) gravity feed weigh scales, and a mixing hopper. The storage silos are used to store polypropylene plastic resin pellets.

- (5) One (1) cooling tower.

#### **New Emission Units and Pollution Control Equipment Receiving Prior Approval**

The source plans to construct the following emission units:

- (a) One (1) PVC plastic film calender (identified as calender 3), constructed in 2003, with a maximum throughput rate of 1,800 pounds of raw material per hour, and consisting of a PVC mix area, extruder, mill, calender, edge trimmer, and winder. Emissions from the extruder, mill, and calendar are exhausted through stack CAL3-1.
- (b) One (1) PVC weigh scale (identified as W5) and mixing system, handling a maximum of 13,200 pounds per hour with particulate emissions controlled by a dust collector, which exhausts at stack PVC MIX-4.
- (c) Three (3) PVC storage silos (identified as Silos 7 through 9) with pneumatic transfer system.
- (d) Two (2) cooling towers.

#### **Existing Approvals**

No previous construction or operating permits been issued to this source.

#### **Enforcement Issue**

- (a) IDEM is aware that equipment has been operated prior to receipt of the proper permit. The subject equipment is listed in this Technical Support Document under the section titled *Unpermitted Emission Units and Pollution Control Equipment*.
- (b) IDEM is reviewing this matter and will take appropriate action. This proposed permit is intended to satisfy the requirements of the construction and operating permit rules.

### Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
PVCMIX-2	PVC Mixer	9	1.0	1,058	Ambient
PVCMIX-4	PVC Mixer	9	1.0	1,058	Ambient
CAL1-1	Extruder, Mill, and Calender	53.5	2.6 by 6.5	18,834	90
CAL2-1	Extruder, Mill and Calender	51	2.6 by 6.5	18,834	90
CAL3-1	Extruder, Mill, and Calender	53.5	2.6 by 6.5	18,834	90
PP1-1	Chill Roll	15	1.0 by 1.0	1,235	90
PP1-2	Granulator	26.7	0.67	988	90
PP2-1	Chill Roll	33	1.08	3,500	90
PP2-2	Chill Roll	16	0.67	1,900	90
PP2-3	Granulator	26.3	0.67	988	90
PP3-1	Chill Roll	15	0.5	1,235	90
PP3-2	Granulator	28	0.67	1,400	90

### Recommendation

The staff recommends to the Commissioner that the construction and operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on November 27, 2002, with additional information received on January 29, 2003.

### Emission Calculations

The calculations submitted by the applicant have been verified and found to be accurate and correct. These calculations are provided in Appendix A of this document (Appendix A, pages 1 through 3).

### Potential To Emit of Source Before Controls

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency.”

Pollutant	Potential To Emit (tons/year)
PM	13.7
PM-10	13.7
SO <sub>2</sub>	0.02
VOC	16.7

CO	2.5
NO <sub>x</sub>	3.0

HAP's	Potential To Emit (tons/year)
Acetaldehyde	0.0013
Acrolein	0.0002
Acrylic Acid	0.0013
Formaldehyde	0.0014
Methylethyl Ketone	0.0006
Propionaldehyde	0.0003
Acetophenone	0.017
Bis (2-ethyl hexyl) phthalate	0.44
Phenol	5.6
Vinyl Chloride Monomer	4.5
TOTAL	10.6

- (a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of criteria pollutants is less than 100 tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.
- (b) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of criteria pollutants is less than 25 tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-6.1.
- (c) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of PM, PM<sub>10</sub>, and VOC are greater than levels listed in 326 IAC 2-1.1-3(d)(1), therefore the source is subject to the provisions of 326 IAC 2-5.5.1. A registration will be issued.
- (d) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of any single HAP is less than ten (10) tons per year and/or the potential to emit (as defined in 326 IAC 2-1.1-1(16)) of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.
- (e) Fugitive Emissions  
Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

### County Attainment Status

The source is located in LaPorte County.

Pollutant	Status
PM-10	Attainment
SO <sub>2</sub>	Attainment
NO <sub>2</sub>	Attainment
Ozone	Attainment
CO	Attainment
Lead	Attainment

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. LaPorte County has been designated as attainment or unclassifiable for ozone.

Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

- (b) LaPorte County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (c) Fugitive Emissions  
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2, 40 CFR 52.21, or 326 IAC 2-3 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

### Source Status

Existing Source PSD, Part 70 or FESOP Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Emissions (ton/yr)
PM	10.8
PM10	10.8
SO <sub>2</sub>	0.02
VOC	10.2
CO	2.5
NO <sub>x</sub>	3.0

- (a) This new source is not a major stationary source because no attainment pollutant is emitted at a rate of 250 tons per year or greater and it is not in one of the 28 listed source categories.
- (b) These emissions were based on the calculations provided in Appendix A.

### Part 70 Permit Determination

#### 326 IAC 2-7 (Part 70 Permit Program)

This existing source, including the emissions from this permit 091-16512-00127, is still not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) each criteria pollutant is less than 100 tons per year,
- (b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
- (c) any combination of HAPs is less than 25 tons/year.

This is the first air approval issued to the source.

### **Federal Rule Applicability**

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.
- (b) Although constructed after July 23, 1984, the storage tanks are not subject to the New Source Performance Standard (NSPS), 40 CFR 60, Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for which Construction, Reconstruction, or Modification Commenced After July 23, 1984 (326 IAC 12), because the maximum capacities of the storage tanks are all less than 40 cubic meters (10,567 gallons).
- (c) This source is not subject to the requirements of 40 CFR 63, Subpart U - National Emission Standards for Hazardous Air Pollutant Emissions: Group I Polymers and Resins (326 IAC 14), because this source is not a major source of hazardous air pollutants and does not manufacture Group I polymers and resins.
- (d) This source is not subject to the requirements of 40 CFR 63, Subpart W National Emission Standards for Hazardous Air Pollutants for Epoxy Resins Production and Non-Nylon Polyamides Production (326 IAC 14), because this source is not a major source of hazardous air pollutants and does not produce epoxy resins or non-nylon polyamides.
- (e) Although this source handles plastic materials, it is not subject to the requirements of 40 CFR 63, Subpart JJJ - National Emission Standards for Hazardous Air Pollutant Emissions: Group IV Polymers and Resins (326 IAC 14), because this source is not a major source of hazardous air pollutants and only performs finishing processes, which are specifically exempt from the requirements of this rule under 40 CFR 63.1310(d).
- (f) This source is not subject to the requirements of 40 CFR 61, Subpart F - National Emission Standard for Vinyl Chloride (326 IAC 14) because this source does not produce vinyl chloride or polymerized vinyl chloride.

### **State Rule Applicability - Entire Source**

#### **326 IAC 2-2 (Prevention of Significant Deterioration (PSD))**

This source is not in 1 of 28 source categories. The source was constructed in the late 1980s and has been modified several times. At construction, the source had a potential to emit for all criteria pollutants that was less than the PSD major source threshold of 250 tons per year, and modifications undertaken since the initial construction have not increased the potential to emit to greater than 250 tons per year. Since the potential to emit criteria pollutants from this source will remain less than 250 tons per year after construction of the new PVC calendar line, PVC mixing facility, storage silos, conveyance systems, this source is a minor PSD source and is not subject to the requirements of 326 IAC 2-2 and 40 CFR 52.21.

#### **326 IAC 2-6 (Emission Reporting)**

This source is located in LaPorte County and the potential to emit CO, NOx, PM10, and SO2 are less than one hundred (100) tons per year. Therefore, the requirements of 326 IAC 2-6 are not applicable.

#### **326 IAC 5-1 (Opacity Limitations)**

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

**326 IAC 7-4-5 (LaPorte County Sulfur Dioxide Emission Limitations)**

Although located in LaPorte County, this source is not subject to the requirements of 326 IAC 7-4-5 because it is not one of the sources listed in this rule.

**326 IAC 8-6 (Organic Solvent Emission Limitations)**

This source is not subject to 326 IAC 8-6 because it was constructed after January 1, 1980. This rule is only applicable to sources located in LaPorte County, which commenced operation between October 7, 1974 and January 1, 1980.

**326 IAC 2-4.1 (New Source Toxics Control)**

- (a) Although constructed after July 27, 1997, the storage tanks, liquid scale areas (W3 and W4), the weigh scale area (W1), and Calender Lines 1, 2 and 3 each have potential HAP emissions that are less than 10 tons per year for a single HAP and less than 25 tons per year for combined HAPs. Therefore, 326 IAC 2-4.1 does not apply to these facilities.
- (b) Although constructed after July 27, 1997, PP Line 3 has potential HAP emissions that are less than 10 tons per year for a single HAP and less than 25 tons per year for combined HAPs. Therefore, 326 IAC 2-4.1 does not apply to this manufacturing line.

The other PP film manufacturing facilities at this source were constructed prior to the July 27, 1997 applicability date and are not subject to this rule.

**State Rule Applicability - Polyvinyl Chloride (PVC) Film Manufacturing Facilities**

**326 IAC 8-1-6 (New Facilities General Reduction Requirements)**

Although these units were all constructed after January 1, 1980, the potential VOC emissions from each unit is less than 25 tons per year; therefore, 326 IAC 8-1-6 is not applicable.

**326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)**

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rates from the PVC film manufacturing facilities shall not exceed the pound per hour emission rates shown in the following table:

Process	Process Weight (lbs/hour)	Process Weight (tons/hour)	Particulate Limitation (lbs/hour)
Calender Line 1	1,600	0.8	3.5
Calender Line 2	925	0.46	2.4
Calender Line 3	1,800	0.9	3.8
Weigh Scale and Mixing Area (W1)	13,200	6.6	14.5
PVC Handling	13,200	6.6	14.5

The particulate emission limits were calculated as follows:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

In order to comply with these limits, the dust collectors used to control emissions from these facilities shall be in operation at all times the associated facilities are in operation.

**326 IAC 8-9 (Volatile Organic Liquid Storage Vessels)**

The storage tanks are not subject to 326 IAC 8-9 because this rule applies only to sources located in Clark, Floyd, Lake, and Porter counties.

**State Rule Applicability - Polypropylene (PP) Film Manufacturing Facilities**

**326 IAC 8-1-6 (New Facilities General Reduction Requirements)**

Although these units were all constructed after January 1, 1980, the potential VOC emissions from each unit is less than 25 tons per year; therefore, 326 IAC 8-1-6 is not applicable.

**326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)**

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rates from the PP film manufacturing facilities shall not exceed the pound per hour emission rates shown in the following table:

Process	Process Weight (lbs/hour)	Process Weight (tons/hour)	Particulate Limitation (lbs/hour)
PP Line 1	1,000	0.50	2.6
PP Line 1 Scrap Grinding	131	0.066	0.27
PP Line 2	1,200	0.60	2.9
PP Line 2 Scrap Grinding	171	0.086	0.79
PP Line 3	1,400	0.70	3.2
PP Line 3 Scrap Grinding	179	0.090	0.81
PP Handling	3,600	1.8	6.1

The particulate emission limits were calculated as follows:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

In order to comply with these limits, the dust collectors used to control emissions from the polypropylene film manufacturing facilities shall be in operation at all times the associated facilities are in operation.



## **Conclusion**

The operation of this flexible plastic film manufacturing plant shall be subject to the conditions of the attached proposed Registration 091-16512-00127.

**Appendix A: Emission Calculations**  
**Particulate Matter Calculations**

**Company Name: American Renolit Corporation**  
**Address City IN Zip: 1207 East Lincolnway, LaPorte, Indiana 46350**  
**CP: 091-16512**  
**Plt ID: 091-00127**  
**Reviewer: ERG/ARB**  
**Date: 30-Jan-03**

Emission Point ID	Amount of Material Collected (pounds/day)	Amount of Material Collected (tons/year)	Actual collection efficiency (%)	Uncontrolled PM Emissions (tons/yr)
PVCMIX-2	5.0	0.91	99%	0.92
PVCMIX-4	5.0	0.91	99.0%	0.92
CAL1-1	7.5	1.37	75%	1.71
CAL2-1	5.0	0.91	75%	1.14
CAL3-1	8.5	1.55	75.0%	1.94
PP1-2	10.0	1.83	99.8%	1.83
PP2-3	12.5	2.28	99.8%	2.29
PP3-2	15.0	2.74	99.8%	2.74
			Total	13.49

Amount of Material Collected (tons/year) = Amount of Material Collected (pounds/day) x 1 ton/2000 pounds x 365 days/year

Uncontrolled PM Emissions (tons/yr) = Amount of Material Collected (tons/year) + Amount of Material Collected (tons/year) x (1 - actual collection efficiency)

**Appendix A: Emission Calculations**  
**VOC Calculations**

**Company Name: American Renolit Corporation**  
**Address City IN Zip: 1207 East Lincolnway, LaPorte, Indiana 46350**  
**CP: 091-16512**  
**Plt ID: 091-00127**  
**Reviewer: ERG/ARB**  
**Date: 30-Jan-03**

Emission Point ID	Maximum Process Rate (lbs/hr)	VOC Emission Factor (lb of VOC/lb of Product)	VOC Emissions (tons/year)
CAL1-1	1600	0.00082	5.75
CAL2-1	925	0.00082	3.32
CAL3-1	1800	0.00082	6.46
PP1-1	1000	0.0000594	0.26
PP2-1	1200	0.0000594	0.31
PP3-1	1400	0.0000594	0.36
Total			16.47

VOC Emissions (tons/year) = Maximum Process Rate (lbs/hr) x VOC Emissions Factor (lb of VOC/lb of Product) x 1 ton/2000 pounds x 8760 hr/year

The emission factor 0.00082 lbs of VOC/lb of product is from a document called "Effect of Plasticizer Type and Level on Simulated Process Emissions From

However, this source uses a higher torque, therefore, this number should be increased by 25%. This increase results in an emission factor of 816.9 milligrams of VOC per kilogram of product, which is equivalent to 0.00082 pounds of VOC per pound of product.

The emission factor 0.0000594 lbs of VOC/lb of product is from the "Journal of the Air & Waste Management Association," Volume 49, January 1999, page 55. The emission factor is 59.4 micrograms of VOC per gram of product, which is equivalent to 0.0000594 pounds of VOC per pound of product.

**Appendix A: Emission Calculations  
Oil Heaters**

**Company Name: American Renolit Corporation**  
**Address City IN Zip: 1207 East Lincolnway, LaPorte, Indiana 46350**  
**CP: 091-16512**  
**Pit ID: 091-00127**  
**Reviewer: ERG/ARB**  
**Date: 30-Jan-03**

Heat Input Capacity  
MMBtu/hr

Potential Throughput  
MMCF/yr

6.8

59.6

(Note: Includes two 3.4 MMBtu per hour hot oil heaters)

Pollutant						
	PM*	PM10*	SO2	NO <sub>x</sub>	VOC	CO
Emission Factor in lb/MMCF	7.6	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.2	0.2	0.02	3.0	0.2	2.5

\*PM and PM10 emission factors are filterable and condensable PM and PM10.

\*\*Emission Factors for NO<sub>x</sub>: Uncontrolled = 100, Low NO<sub>x</sub> Burner = 50, Low NO<sub>x</sub> Burners/Flue gas recirculation = 32

### Methodology

All Emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF - 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors from AP-42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (AP-42 Supplement D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

**Appendix A: Emission Calculations  
Oil Heaters**

**Company Name: American Renolit Corporation**  
**Address City IN Zip: 1207 East Lincolnway, LaPorte, Indiana 46350**  
**CP: 091-16512**  
**Pit ID: 091-00127**  
**Reviewer: ERG/ARB**  
**Date: 30-Jan-03**

**HAPs - Organics**

Emission Factor in lb/MMCF	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	6.255E-05	3.574E-05	2.234E-03	5.361E-02	1.013E-04

**HAPs - Metals**

Emission Factor in lb/MMCF	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	1.489E-05	3.276E-05	4.170E-05	1.132E-05	6.255E-05

Methodology is the same as previous page.

The five highest organic and metal HAPs emission factors are provided above.  
 Additional HAPs emission factors are available in AP-42, Chapter 1.4.

**Appendix A: Emission Calculations**  
**HAP Emissions**

**Company Name: American Renolit Corporation**  
**Address City IN Zip: 1207 East Lincolnway, LaPorte, Indiana 46350**  
**CP: 091-16512**  
**Plt ID: 091-00127**  
**Reviewer: ERG/ARB**  
**Date: 30-Jan-03**

HAP	Emission Rate* (lbs/lb processed)	Material Processed (lbs/hr)			Total Processed (tons/yr)	HAP Emissions (lbs/yr)	HAP Emissions (tons/yr)
		Calender Line 1	Calender Line 2	Calender Line 3			
Acetophenone	9.10E-07	1600	925	1800	18,944	34.48	0.017
Bis(2-ethylhexyl)phthalate (DEHP)	2.30E-05	1600	925	1800	18,944	871.40	0.44
Phenol	2.97E-04	1600	925	1800	18,944	11,252.44	5.6
Vinyl Chloride Monomer (VCM)	2.40E-04	1600	925	1800	18,944	9,092.88	4.5
Total HAP Emissions (tons/yr)						21,251.20	10.63

\* - Emission factors are from "Effect of Pasticizer Type and Level on Simulated Process Emissions From Experimental Flexible Polyvinyl Chloride Compounds"  
 prepared by The Vinyl Institute and Chemical Fabrics and Film Association, Inc. (1997).

**Methodology:**

HAP Emissions (tons/yr) = Emission Rate (lbs/lb) \* Amount of PVC Processed (lbs/yr) \* 1 ton/2000lbs

HAP	Emission Rate* (lbs/lb processed)	Material Processed (lbs/hr)			Total Processed (tons/yr)	HAP Emissions (lbs/yr)	HAP Emissions (tons/yr)
		PP Line 1	PP Line 2	PP Line 3			
Acetaldehyde	8.00E-08	1,000	1,200	1,400	15,768	2.52	0.00126
Acrolein	1.00E-08	1,000	1,200	1,400	15,768	0.32	0.00016
Acrylic Acid	8.00E-08	1,000	1,200	1,400	15,768	2.52	0.00126
Formaldehyde	9.00E-08	1,000	1,200	1,400	15,768	2.84	0.00142
Methylethylketone	4.00E-08	1,000	1,200	1,400	15,768	1.26	0.00063
Propionaldehyde	2.00E-08	1,000	1,200	1,400	15,768	0.63	0.00032
Total HAP Emissions (tons/yr)						10.09	0.00505

\* - Emission Factors are from Table 5 in "Development of Emission Factors for Polypropylene Processing" published in the *Journal of Air & Waste Management Association*, Volume 49, January 1999.

**Methodology:**

HAP Emissions (tons/yr) = Emission Rate (lbs/lb) \* Amount of Polypropylene Processed (lbs/yr) \* 1 ton/2000lbs